# MINUTES OF THE NUTRITION COORDINATING COMMITTEE (NCC) MEETING, NATIONAL INSTITUTES OF HEALTH (NIH)
Rockledge II – Conference Room 9112/9116
February 6, 2014 2:00 – 4:00 PM

## WELCOME

Dr. Van Hubbard, Director of the NIH Division of Nutrition Research Coordination (DNRC), convened the meeting at 2:03 PM and welcomed participants. Phone participants included the following: Dr. William Alexander, NIH NIAID; Dr. Josephine Boyington, NIH NHLBI; Dr. Heidi Blanck, CDC; Dr. Lauren Cator; Dr. Lisa Chadwick, NIH NIEHS; Dr. Hillary Chen, OSTP; Dr. Paul Coates, NIH ODS: Dr. Janet Collins, CDC; Dr. Jennifer Collins, NIH NIEHS; Dr. Milton Corn, NIH NLM; Dr. Paul Cotton, NIH NINR; Dr. Amber Courville, NIH CC; Ms. Mary Cutting, NIH NIDCR; Dr. Johanna Dwyer, NIH ODS; Dr. Greg Germino, NIH NIDDK; Dr. Kimberly Gray, NIH NIEHS; Dr. Jo Handelsman, OSTP; Dr. Judy Hannah, NIH NIA; Dr. Tisha Johnson, HHS OASH; Ms. Joanne Karimbakas, NIH NIDDK; Dr. Richard Kotz, FDA; Ms. Michelle Lawler, HRSA; Dr. Jessica Leighton, FDA; Dr. Linda Nebeling, NIH NCI; Dr. Samara Joy Nielsen, CDC NCHS: Dr. Sara Ohlhorst, ASN; Dr. Jen Patro, FDA CFSAN; Dr. Chris Pernell, HHS OASH; Dr. Katrina Piercy, HHS ODPHP; Dr. Carol Pontzer, NIH NCCAM; Dr. Charlotte Pratt, NIH NHLBI; Dr. Dan Raiten, NIH NICHD; Dr. Tonse Raju, NIH NICHD; Ms. Colette Rihane, USDA CNPP; Ms. Dana Sampson, NIH OBSSR; Dr. Kelley Scanlon, CDC; Dr. Megan Singh, NIH NIDDK; Dr. Pam Starke-Reed, USDA ARS; Dr. Susan Volman, NIH NIDA; Dr. Susan Yanovski, NIH NIDDK; and Dr. Howard Young, NIH NCI. The agenda for the meeting is provided as Appendix A and the list of attendees is provided as Appendix B.

## APPROVAL OF MINUTES FROM THE DECEMBER 5, 2013 NCC MEETING

Minutes from the December 5, 2013 NCC meeting had previously been sent to NCC members via email. Dr. Hubbard asked if there were any other corrections to the minutes. There were none. Dr. Paul Coates, the NIH Office of Dietary Supplements (ODS), made a motion to approve the minutes, and Dr. Sharon Ross, NIH National Cancer Institute (NCI). The minutes were thus approved and will be posted on the DNRC website, http://www.dnrc.nih.gov, along with the minutes from the previous NCC meetings.

## REMEMBERING JOHN MILNER

Dr. Van Hubbard opened the meeting with a moment of silence in honor of Dr. John Milner, a friend and colleague who died on New Year's Eve, 2013. Dr. Hubbard acknowledged the many contributions Dr. Milner made to nutrition over the years during his time in academics, at NIH, and most recently as the Director of the USDA Beltsville Human Nutrition Research Center. He will be greatly missed by all of us on the Nutrition Coordinating Committee. Please see attached "In Memoriam", written by David Schmidt

(President and CEO of the International Food Information Council Foundation), which eloquently describes John and reflects the high esteem in which he was held by so many (APPENDIX C).

**ADVANCING THE NUTRITIONAL SCIENCE RESEARCH AGENDA: THE PROBIOTIC/PREBIOTIC FOOD AND MICROBIOME MODEL**

Dr. Hubbard introduced today's special topic, the probiotic/prebiotic food and microbiome model, which has direct application to nutritional science. Advancements in the field have been greatly enhanced by a collaborative framework and will continue to depend on these collaborations. To give an overview of the resources for mechanisms of interaction and the limitations that may apply, the following resources are provided. These particular resource sites are primarily related to Private-Public Partnerships, but are also available for interactions across agencies.

- **IAA Template – General Terms**
  http://www.fms.treas.gov/finstandard/forms/IAA-general-terms-condition-ver6-09-23-11.pdf

- **Private-Public Partnership [PPP] Policies [NIH/OD - FNIH]**
  http://ppp.od.nih.gov/mou/mou.asp#

- **Cooperative Research and Development Agreement (CRADA)**
  http://www.ott.nih.gov/cradas

- **Memorandum of Understanding [MOU]** http://ppp.od.nih.gov/mou/mou.asp#

*INCORPORATION INTO CURRENT INTER-AGENCY FRAMEWORK:*

Dr. Jo Handelsman, currently a Consultant to the Director of the White House Office of Science and Technology Policy (OSTP) and Senate confirmation pending for Associate Director for Science, shared her thoughts on the importance of research related to microbiome. Dr. Handelsman is on leave from Yale where she was a professor in the Department of Molecular, Cellular and Developmental Biology and has a significant interest in microbiome research and policy. As a top priority at the White House, OSTP will be formulating a path forward and hopes interested NCC members can be part of the discussion to help frame the agenda and publicize the topic. Understanding mechanisms, not only the role that the microbiome plays in health and disease but also how to manipulate a microbial community, will be of significant priority. Dr. Handelsman looks forward to further interactions with the NCC and encouraged members to contact her or her colleague, Dr. Hillary Chen, who spoke at the December NCC meeting, with additional ideas and questions.

## *NCATS – MODELS AND DATA EXCHANGE PLATFORMS*

Drs. Christine Colvis and Kristin Fabre spoke about the NIH National Center for Advancing Translational Sciences (NCATS) efforts to catalyze the generation of innovative methods and technologies that will enhance the development, testing and implementation of diagnostics and therapeutics across a wide range of human diseases and conditions. NCATS' efforts to Develop, Demonstrate, and Disseminate focus on addressing scientific and technical challenges to expedite the development of new treatments and tests as a means of improving human health. The Center aims to make translational science more efficient, less expensive and less risky.

The National Institutes of Health is partnering with the US Food and Drug Administration (FDA) and the Defense Advanced Research Projects Agency (DARPA) to accelerate the development of Human Microphysiological Systems (MPS, aka Tissues Chip). The NIH Tissue Chip for Drug Screening initiative is the result of collaborations that focus the resources and ingenuity of the NIH, DARPA, and the FDA. The NIH Common Fund and the NIH National Institute of Neurological Disorders and Stroke (NINDS) led the trans-NIH efforts to establish this program. The NIH plans to commit up to $70 million over five years for the program. A link to the Tissue Chip for Drug Screening initiative is as follows: http://www.ncats.nih.gov/research/reengineering/tissue-chip/tissue-chip.html

Dr. Fabre described the portfolio of NIH grants that are aimed at creating 3-dimensional "chips" with living multi-cellular systems that accurately model the structure and function of human organs such as the lung, liver and heart. The tissue chip projects merge techniques used by the computer industry with modern tissue engineering by combining miniature models living organ tissues on a microchip designed to mimic human physiology. The chips are lined with living cells and have features that are designed to replicate the complex biological functions of specific organs in the human body. This technology has enormous potential. Researchers have created a "gut-on-a-chip" microdevice that is lined by living human cells that mimics the structure, physiology, and mechanics of the human intestine and even supports the growth of living microbes within its luminal space. [Kim (*Lab Chip* 2012): http://pubs.rsc.org/en/content/articlepdf/2012/lc/c2lc40074j]

New cell technologies and functional assays hold tremendous promise for developing personalized treatments, understanding biological and genetic mechanisms of metabolic processes and diseases, and developing effective treatments. The future holds great promise for new technology and therapeutic advances. A Supplement issue of *Stem Cell Research and Technology* published in 2013 was dedicated to the topic of stem cells on bioengineered microphysiological platforms for disease modeling and drug testing and highlighted advances in Induced Pluripotent Stem Cell (iPSC) research. http://stemcellres.com/supplements/4/S1

Future NCC meetings will include updates on the progress of the tissue chip and other initiatives that are utilizing new cell technologies with emphasis on the application to the nutritional sciences.

## *PROBIOTIC FOODS AND MICROBIOME: NUTRITION SYSTEMS BIOLOGY AND MICROBIOME*

Dr. Linda Duffy, Program Director, NIH/NCCAM and Scientific Chair of the Probiotics/Prebiotics Working Group (PPWG), an Inter-Agency work group under the auspices of the Trans-NIH Division of Nutrition Research Coordination and member of the Trans-NIH Microbiome Workgroup (TMWG), emphasized that the human microbiome plays a key role in a wide range of processes, including maintaining normal physiology and energy balance throughout life; has profound effects on human health; and that a systems biology approach is necessary when studying how nutritional/dietary and nutrient-drug interactions impact gut metabolism and the human microbiome. She highlighted the advances in probiotic and microbiome research made possible by emerging "Omic" technologies, which have increased our understanding and revealed previously unrecognized links between the microbiome and health and disease. Dr. Duffy mentioned that Dr. Jeffrey Gordon's laboratory has pioneered experimental studies of the potential role of probiotics and prebiotics in improving inflammatory tone, obesity and energy production, with promising evidence that selected strains of probiotic/prebiotic modalities may improve microbial balance, decrease food intake, reduce abdominal adiposity and increase mucosal integrity (and the subject of a WALS presentation this past year as nominated by the PPWG). The converging fields of probiotic/prebiotic biology and the microbiome have a major impact on providing novel targets and biomarkers for advancing nutritional science research on host-microbe co-metabolism and immunologic processes in health and disease.

Other exciting new avenues are being explored by the PPWG and TMWG members working with NIH and inter-agency funded investigators studying the role of probiotics/prebiotics intervention strategies on the microbiome in combatting undernutrition and the transcriptional network alterations have been associated with selected lactobacillus and bifidobacterium strains cognitive processes. Despite the diversity of challenges for comparative fields of study, there is tremendous value in cross-disciplinary expertise and sharing data biovalidation strategies using new molecular omic tools and incorporating microbial ecology principles in the modelling from the enormous datasets being produced for studying nutrition and host-microbiome co-metabolism.

Dr. Duffy ended her overview of the inter-agency collaborative efforts to date going on between the NIH, USDA/ARS, FDA, CDC and DoD, suggesting transforming nutritional science research concurrent with emerging microbiome platform "omic" technologies

already in place for pharmaco strategies will require a multi-level coordinated framework that includes advancing metabolomics and NCATS platform capacity to launch organ-on-a-chip approaches and nutritional data networks that can handle the complex BIG datasets with new ecologically sound-computational modelling and dietary assessment/validation strategies.

### *Joint Funding Announcement - The Probiotic and Prebiotic Working Group and Trans-NIH Microbiome Working Group: Concept Planning*

Dr. Linda Duffy informed the participants of NCC about the *Concept Planning: Advancing Nutrition Science Research Host-Microbial Metabolism*, a presentation in conjunction with Dr. Lita Proctor, Director of the NIH Microbiome Project. During this talk, Dr. Duffy highlighted the multiple collaborations in the works at NIH to advance the microbiome agenda which include: Trans-NIH Microbiome Working Group (TMWG), Prebiotic and Probiotic Working Group (PPWG), and the Microbiome Scientific Interest Group. She emphasized the Trans-NIH Working Group contributions to informing science related to the microbiome, but reiterated the need for collaboration in this field of research. Dr. Duffy discussed the contributions of metagenomic technologies and outlined some of the current and future research possibilities related to nutrition. Finally, Dr. Duffy mentioned the plan to release a joint funding opportunity announcement (FOA) between twelve ICs who are a part of TMWG and PPWG. This FOA is in the early stages of planning and she invited other ICs to join in this effort. For more details, please contact Dr. Duffy (duffyl@mail.nih.gov).

### *Funding Opportunity Announcement (R01) in Development: USDA/NIH Metabolomics*

Dr. Padma Maruvada, Program Director in the Division of Digestive Diseases and Nutrition (DDN), National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK) at the NIH spoke about advancing nutritional science research and a unique collaborative between the NIH and the U.S. Department of Agriculture National Institute of Food and Agriculture (NIFA). Dr. Dionne Toombs, the Director for the Division of Nutrition at NIFA serves as Co-Lead of the Working Team with Dr. Maruvada. The common goals of this initiative are to support nutrition research and promote health and disease prevention efforts by aligning the resources and expertise of both agencies in support of their mission goals and strategic priorities.

The initiative offers opportunities to develop and validate basic and applied research. Nutrition provides a large window of opportunity for disease prevention, and prior research has shown that dietary components modify various cellular and metabolic processes including the human gut microbiome. Different foods and ingredients play a crucial role in the pathophysiology of disease etiology, progression and associated burden.

Dr. Maruvada described efforts to discover and validate food and nutrient-specific metabolic signatures of dietary intake and long-term dietary exposures to advance our understanding of the ways nutrients interact and compete with one another. This effort could lead to the development of an inventory database on food-specific molecular signatures which would improve our understanding of the interaction and competition between nutrients as it relates to nutrient absorption, transport, metabolism, and elimination. A collaborative strategy to coordinate and harmonize research efforts between NIH and USDA-funded researchers will inform policy and facilitate dissemination of research findings to the stakeholder community. NIH and USDA will solicit proposals using the R01 mechanism. A workshop is planned as a means of facilitating interactions among NIH and USDA grantees. Potential applicants with existing collections of biological samples and limited clinical research will be encouraged to apply.

Dr. Maruvada mentioned two reports in her presentation:

- Institute of Medicine of the National Academies: *Dietary reference intakes: research synthesis workshop summary*. Washington, DC: The National Academies Press; 2007

- Highlights of the 2012 NIDDK sponsored research workshop: *Using nutrigenomics and metabolomics in clinical nutrition research*. Zeisel SH, Waterland RA, Ordovás JM, Muoio DM, Jia W, Fodor A. *J Parenter Enteral Nutr*. 2013 Mar;37(2):190-200

Dr. Dan Raiten, NICHD, also mentioned that this project could dovetail nicely with the Biomarkers of Nutrition for Development (BOND) program (https://www.nichd.nih.gov/global_nutrition/programs/bond/Pages/index.aspx) and reiterated the need to work together.

*Discussion*

Dr. Hubbard wrapped up the discussion by asking NCC participants to consider other areas of nutritional science that would benefit from more integration and collaboration across agencies and disciplines, similar to what is happening with nutrition and the microbiome. If there are suggestions, the DNRC can organize a special NCC meeting around the topic.

**HHS OFFICE OF DISEASE PREVENTION AND HEALTH PROMOTION (ODPHP) UPDATE:**

Dr. Kellie Casavale provided several updates pertaining to the 2015 Dietary Guidelines Advisory Committee.

*Dietary Guidelines Advisory Committee:*

The 2015 Dietary Guidelines Advisory Committee (DGAC) held their second meeting (rescheduled due to the government shutdown from October 3-4, 2013) on January 13-14, 2014. Meeting materials and the webcast recordings are available on www.DietaryGuidelines.gov. Fifty-two individuals provided public oral testimony. Attendance averaged over 200 in-person and 300 via live webcast with a large volume of subsequent views of the webcast recordings (see past events for January 13 and January 14, 2014).

The third public meeting of the 2015 DGAC was announced on www.DietaryGuidelines.gov on February 4th. The third meeting will be Friday, March 14, 2014 from 8:00 a.m. – 4:45 p.m. EST. The official notice is expected to publish in the *Federal Register* the week of February 10th. Registration is now open. This and all future meetings will be webcast only, with no in-person attendance from the public.

As mentioned at the second public meeting, the Committee is requesting written public comments (submitted through the Public Comments Database at www.DietaryGuidelines.gov) in some specific areas. A Committee document has been posted to the website to describe these specific requests for comments. This page may be updated periodically as the Subcommittees identify areas of need. Currently, the requests include information on food safety; approaches and current examples of food systems sustainability; and the steps the food industry is taking or has taken to reduce sodium, added sugars, and fats (total, saturated, *trans*, and individual fatty acids) in the food supply.

Ms. Holly McPeak provided additional updates from ODPHP:

*Designing Health Literate Mobile Apps - Jordan Broderick, et al.*

As mobile devices become more popular, mobile health applications (mHealth apps) present opportunities to improve health and wellness. However, poorly designed mHealth apps can contribute to the challenges many people have understanding and acting on health information - challenges that are exacerbated for users with low health literacy. The authors of this discussion paper call for app developers to build "health literate apps" that apply usability and health literacy strategies throughout the development process. The paper offers a set of strategies for developers and a case study to demonstrate how the strategies can be effectively applied in the development process. Read the Discussion Paper >>

*Healthy People 2020 Progress Review Webinar*

Join the Office of the Assistant Secretary for Health on February 26, 2014 at 2:00 p.m. ET for a Healthy People 2020 Progress Review Webinar focusing on early detection, prevention, and treatment of substance use and mental disorders. This presentation is part of the Healthy People 2020 Progress Review series, which focuses on tracking and measuring the progress of Healthy People 2020 objectives. Learn more about Mental Health and Mental Disorders and Substance Abuse.

Register today:
http://healthypeople.gov/2020/learn/webinars.aspx

**OFFICE OF DIETARY SUPPLEMENTS (ODS) UPDATE**

Dr. Paul Coates, ODS, provided the following updates:

1. Amy Subar from NCI will be giving the next ODS seminar entitled, "The automated self-administered 24-hour recall (ASA24): current status, new features and evaluation results" at 11:00 AM on February 12 in the first floor conference room of 6100 Executive Blvd.
2. Two systematic reviews related to vitamin D are currently available in draft form for comment. One is an AHRQ review conducted as background for a US Preventive Services Task Force study related to the effectiveness of vitamin D screening. The second, also an AHRQ review, has been carried out at the request of ODS and was structured to update the 2009 AHRQ report on health outcomes associated with vitamin D. It will help inform a number of projects that ODS is considering, including the use of evidence-based decision-making related to vitamin D in the primary care setting.
3. The 3rd International Vitamin Conference will be held at the Hamilton Crowne Plaza in Washington from May 12-15, jointly organized by ODS and NIST. The website will be open shortly for registration: www.vitaminconference.com. (f/u note – web site went active 2/7/2014) Please contact Regan Bailey in ODS for further information: baileyr@mail.nih.gov.
4. ODS has organized an NIH Dietary Supplement Scientific Interest Group. Please contact Cindy Davis at davisci@mail.nih.gov if you are interested in being added to the listserv.
5. ODS has begun an NIH intramural research scholars program. Letters of intent are due May 2, 2014. Please contact Cindy Davis at davisci@mail.nih.gov if you would like additional information.

6. ODS and NCCAM have joined to release the RFA for renewal of the Botanical Dietary Supplement Research Centers (P50): http://grants.nih.gov/grants/guide/rfa-files/RFA-OD-14-001.html. NCCAM and ODS have also joined to release the RFA for a new Center for Advancing Natural Products Innovation and Technology (U41): http://grants.nih.gov/grants/guide/rfa-files/RFA-AT-14-006.html. Please contact Barbara Sorkin in ODS (sorkinb@od.nih.gov) or Craig Hopp in NCCAM (hoppdc@mail.nih.gov) for further information about these two RFAs.

7. ODS, ORDR/NCATS, and NICHD are planning an international meeting on *Nutritional Interventions for Primary Mitochondrial Diseases* for December 2-3, 2014. Please contact Kathy Camp in ODS for further information: campkm@od.nih.gov.

**REPORTS FROM NCC MEMBERS AND LIAISONS**

- Dr. Hubbard made the first announcement to thank Dr. Pamela Starke-Reed for the many contributions she made over the 13 years she served as Deputy Directory at the DNRC. Dr. Starke-Reed recently took a new position as Deputy Administrator, Nutrition, Food Safety & Quality at the Agricultural Research Service, USDA.

- On behalf of Dr. Joe Spence, the Beltsville Area Director, USDA, Dr. Hubbard announced that USDA is planning a 1-day symposium in honor of Dr. John Milner on June 12, 2014. It will take place in the Jefferson Auditorium at the Whitten Building downtown. The symposium will include speakers related to the various interactions John had over the years.

- Ms. Elaine Trujillo, NCI, reminded NCC participants that the next STARS in Nutrition and Cancer lecture will take place on March 18th from 1:00 to 2:00 PM in the Lipsett Amphitheater, Building 10. Dr. Chi Van Dang from the University of Pennsylvania School of Medicine will be giving a talk entitled, “Links between Metabolism and Cancer.”

- Ms. Trujillo also announced that NCI has named their Nutrition and Cancer Prevention Research Practicum in John Milner’s honor.

- Ms. Kathryn McMurry announced that the NHLBI Division for the Application of Research Discoveries (DARD) has been renamed the Center for Translation Research and Implementation Science (CTRIS).

- CAPT Shirley Blakely, made two announcements on behalf of FDA:

    1. On February 6, FDA will release an interim final rule that sets standards for manufacturers to produce safe infant formula that supports healthy growth.

The interim final rule amends FDA's quality control procedures, requirements about how and when manufacturers must notify the agency about new formulas and changes to formulas, and requirements concerning what manufacturing and related records and reports must be established and maintained. It establishes current good manufacturing practices specifically designed for infant formula, including required testing for contamination from harmful bacteria such as Salmonella. In addition, the interim final rule will help ensure that infant formula contains all federally required nutrients, such as protein, fat, and certain vitamins and minerals, and that the formula supports healthy growth.
http://www.fda.gov/Food/NewsEvents/ConstituentUpdates/ucm384911.htm

2. FDA is reopening, for 60 days, the comment period for specific portions of its final guidance for clinical investigators, sponsors, and institutional review boards (IRBs), entitled "Investigational New Drug Applications (INDs) -- Determining Whether Human Research Studies Can Be Conducted Without an IND," which was announced in the September 10, 2013 *Federal Register*.
    - Federal Register Notice for the Reopening of the Comment Period

    This topic was discussed at the December 2013 NIH NCC meeting. NIH staff was asked to send any data of which they were aware of concerns being raised by this proposed guidance to the attention of Dr. Hubbard.

**CURRENT DNRC UPDATE OF ACTIVITIES**

*National Nutrition Month Mini-Symposium*

In honor National Nutrition Month, the DNRC will be hosting its annual half-day symposium entitled, "The Human Microbiome: Implications for Nutrition and Clinical Practice" on Friday March 28 in the Lister Hill Auditorium on the NIH campus. Please save the date. The final agenda and a link to register will be available on the DNRC website soon.

*Nutrition Education Subcommittee (NES):*

The NES reviews nutrition education materials for scientific and technical accuracy and consistency with the *Dietary Guidelines for Americans (DGAs), 2010.*

NES Chair, Dr. Margaret McDowell, NIH/DNRC reported that the NES completed two dietary guidance reviews since the December NCC meeting. The NES is currently reviewing two other submissions.

**Completed NES Reviews**:

- **USDA/CNPP *Healthy Eating on a Budget Web Content and Two-Week Menu with Supporting Resources***: The target audiences for the materials are low-income adults and families and educators working with families. The dietary guidance, menus and other resources can be used by anyone wanting to create a nutritious diet while staying within their food budget.

  Many recipes used in the sample menus provided were selected from the USDA Recipe Finder database on the SNAP-Ed Connection website (http://recipefinder.nal.usda.gov/). The menus are based on a 2,000 calorie USDA Food Pattern, which is an appropriate calorie level for some adult men, women, teens, and children 9 and older. The food group and nutrient content of the menus were analyzed using data from the SuperTracker online application. Food costs were calculated using the 2009 Foods Prices Database, adjusted to 2013 costs.

- **USDA FNS WIC Program's updated *The Next Steps to Health for You and Your Family***: This submission updates the 1997 booklet entitled, *After You Deliver*. The target audience for the booklet is breastfeeding and non-breastfeeding post-partum mothers who are leaving the WIC Program. The content and design of the booklet is appropriate for diverse low-literacy and low SES target audiences. FNS contracted with APR, Inc. to conduct focus groups with English and Spanish-speaking program WIC participants to obtain feedback on the content and design of the booklet. The dietary guidance messages and content reflect the *Dietary Guidelines for Americans 2010* and incorporate the MyPlate logo and food group guidance.

**The NES is currently reviewing:**

- **HHS Office on Women's Health (OWH**) ***Heart-Healthy Eating Fact Sheet* and *Heart Healthy Q and As*-** The OWH is working to make the womenshealth.gov mobile-friendly. The Heart Healthy materials were recently updated to reflect the 2010 *Dietary Guidelines for Americans* and incorporate plain language communication elements. The target audience for the material is adult women.

- **NIH Health and Wellness Website Nutrition Content-** The NIH Health and Wellness Council launched a major effort to redesign and improve the NIH Health and Wellness website. When completed, this internal site will be a comprehensive health and wellness information resource for NIH employees and contractors. DNRC staff developed the nutrition content of the website. The nutrition pages feature brief text content and numerous links to federal government websites, nutrition education resources, web tools, databases and social media. The NES

and other HHS and USDA dietary guidance reviewers are reviewing the nutrition content of the site. The website will launch this spring.

*NIH Health and Wellness Council*

A subcommittee of the NIH Health and Wellness Council worked with ORS IT to develop a website pertaining to employee wellness. The site will include a comprehensive list of NIH resources and will provide easily accessible information on a variety of wellness topics, including nutrition. Content is currently being uploaded to the site and will soon undergo user acceptance testing. The site is expected to launch in the spring of 2014.

**NEXT NCC MEETING**

The next regularly scheduled NCC meeting will be on March 6, 2014.

**ADJOURNMENT**

The meeting was adjourned at 4:00 PM

**LIST OF APPENDICES**

Appendix A: NIH NCC Meeting Agenda for February 6, 2014
Appendix B: NIH NCC Meeting Attendees for February 6, 2014
Appendix C: In Memoriam: John Milner

## APPENDIX A: NIH NUTRITION COORDINATING COMMITTEE MEETING AGENDA

Thursday, February 6, 2014
2:00 – 4:00 pm
Rockledge II – Conference Room 9112/9116

1. **Welcome**……..……...……..…….…….....Van Hubbard, DNRC

2. **Approval of Minutes of December 5, 2013 Meeting** ……...……..……..Van Hubbard, DNRC

3. **Advancing the Nutritional Science Research Agenda:**
   **The Probiotic/Prebiotic Food and Microbiome Model**
   - **Overview and Resources for Mechanisms of Interactions**……..NIH Staff
   - **NCATS- Models and Data Exchange Platforms**…….....Christine Colvis
     Kristin Fabre
     Dan Tagle
   - **Incorporation into Current Inter-Agency Framework**…….……Hillary Chen (OSTP)
     Jo Handelsman (OSTP)
     Pamela Starke-Reed (USDA)
     Van Hubbard (DNRC)

   **Examples –FOAS and Workgroup Initiatives,**
   **Memorandum of Understanding [Active]**
   - *U01 [Probiotics and Microbial Validation*……..Gloria Solano-Aguilar (USDA)
     Linda Duffy (NCCAM)

   **Memorandum of Understanding and IAAs – in Planning**
   - Joint FOA: Prebiotics/Probiotics Working Group
     And Trans-NIH Microbiome Working Group…….Lita Proctor and Linda Duffy
   - FOA R01 in Development: USDA/NIH Metabolomics……Padma Maruvada
   - Other Comments and Discussion ……...All

4. **ODPHP Update**……Kellie Casavale and Holly McPeak

5. **ODS Update** ……..…….....Paul Coates, ODS

6. **Reports from NCC Members and Liaisons** ……..…..…….....……..…NCC Members

7. **Current DNRC Update of Activities***…..... DNRC Staff
   - Nutrition Education Subcommittee Update…..……Margaret McDowell
   - International Committee Information….,…… ……Dan Raiten

- HNRIM Update……..…….Jim Krebs-Smith/Karen Regan
- PPWG .....Crystal McDade-Ngutter
- Wellness Workgroup .....Rachel Fisher/Margaret McDowell

**8. Next Meeting** – March 6, 2014

* Updates generally will be included in the minutes of the meeting only

## APPENDIX B: NCC MEETING ATTENDEES FOR FEBRUARY 6, 2014

| Agencies, Institutes, Centers, and Divisions | Members Present | Members Absent | Alternates Present | Other Individuals Present |
|---|---|---|---|---|
| DNRC Director (Chair) | V Hubbard | | | |
| | | | | |
| **NIH MEMBERS** | | | | |
| NCI | S Ross | | | R Flores; Y Kim; L Nebeling; G Riscuta; H Seifried; E Trujillo; H Young |
| NCATS | C Colvis | | | K Fabre |
| NCCAM | L Duffy | | | C Pontzer |
| NHLBI | K McMurry | | J de Jesus | J Boyington; A Ershow; C Pratt |
| NIDCR | M Cutting | | | |
| NIDDK | R Kuczmarski | | | G Germino; J Karimbakas; P Maruvada; M Singh; R Tilghman; S Yanovski |
| NINDS | | | | |
| NIAID | | P Sato | | W Alexander; E Petrakova |
| NIGMS | | S Somers | | |
| NICHD | | G Grave | D Raiten | T Raju |
| NEI | | S Gordon | | |
| NIEHS | K Gray | | | L Chadwick; J Collins |
| NIA | J Hannah | | | |
| NIAMS | X Wang | | | |
| NIDCD | | B Wong | | |
| NIMH | | M Chavez | | |
| NIMHD | | D Tabor | | |
| NIDA | S Volman | | | |
| NIAAA | | R Breslow | | |
| NINR | P Cotton | | | |
| | | | | |
| FIC | | M Levintova | | |
| NHGRI | | D Scholes | | |
| | | | | |
| **NIH LIAISONS** | | | | |
| CC | A Courville | | | |
| CSR | | R Garofalo | | |
| NLM | M Corn | | | |
| OBSSR | D Sampson | | | |
| ODS | P Coates | | | K Camp; J Dwyer; B Sorkin |
| OD/ODP | | B Portnoy | | |

| Agencies, Institutes, Centers, and Divisions | Members Present | Members Absent | Alternates Present | Other Individuals Present |
|---|---|---|---|---|
| PRCC | | D Stredrick | | |
| | | | | |
| **AGENCY LIAISONS** | | | | |
| AHRQ | | I Mabry-Hernandez | | |
| CDC/NCCDPHP | | J Seymour | K Scanlon | H Blanck; J Collins |
| CDC/NCHS | | N Ahluwalia | | S J Nielsen |
| FDA | | M Poos | S Blakely | R Kotz; J Leighton; J Patro |
| HRSA | M Lawler | | | |
| IHS | | T Brown | | |
| ODPHP | H McPeak | | | K Casavale; T Johnson; C Pernell |
| USDA/ARS | D Klurfeld | | | J Finley; G Solano-Aguilar; P Starke-Reed |
| USDA/NIFA | | D Chester | | |
| USDA/CNPP | C Rihane | | | |
| DOD | | | | |

**DNRC**: D Brown, R Fisher; S Fleischhacker; S Frazier; K Friedl (special volunteer); J Krebs-Smith; C McDade-Ngutter; and M McDowell

**GUESTS:** L Cator; H Chen, White House, OSTP; J Handelsman, White House, OSTP; S Ohlhorst, ASN

## APPENDIX C

# In Memoriam: John Milner Put the "Fun" in Functional Foods

**BY DAVID SCHMIDT, PRESIDENT & CEO, IFIC FOUNDATION**

All of us at *Food Insight* were saddened to learn that our friend and colleague, Dr. John A. Milner, died on New Year's Eve, 2013. Dr. Milner served for 10 years as a public liaison on our International Food Information Council (IFIC) Foundation Board of Trustees, always bringing pearls of wisdom along with homespun humor to get his points across. He has been such a leader in food and nutrition science around the world that we now must think "legend" rather than just leader.

I've known John for most of my twenty-year tenure with IFIC & IFIC Foundation. He has generously served as a subject matter expert on functional foods and other nutrition issues for the IFIC Foundation for these two decades. One of my earliest memories of his impact was attending an international conference on functional foods in Singapore in 1995. He seemed larger than life then, with his booming, jovial voice and cogent insights on the power of discovering health benefits beyond basic nutrition in foods we eat every day. When you were in a room with John Milner, you knew it immediately, and you enjoyed it! He was one of a handful of academic experts who had more interesting and entertaining slides than I generally had, so I often asked to use his.

He presented in such a sensible, logical and entertaining way that provided the scientific rationale and motivation for eating the way your mother always wanted you to: a balanced diet of protein, whole grains, fruits, vegetables and dairy—all with dietary components that we're just learning even more about. John also emerged quickly as a global expert on the concept of personalized nutrition or "nutrigenomics." Yet he couched the exciting potential of this dietary concept with a dose of reality about what we know and don't know. **Here's** (http://www.youtube.com/watch?v=vfuEKbxcMcE )John in action during our IFIC Foundation's 2011 Global Diet and Physical Activity Communications Summit: "Insights to Motivate Healthful, Active Lifestyles." Several years ago, I heard him say that we were twenty years away from knowing enough about the potential of certain dietary components affecting our diets, based on our DNA. About five years later I was with him at a conference at the University of California at Davis, and I reminded him of his prediction and asked how many years it would be then (by my math, about 15.) "About 20," he replied. "We are still just scratching the surface of what we need to know."

It is that sense of promise and excitement about the potential of food and health that I saw Dr. Milner evoke in so many audiences and be ratified by many of his former students I've come to know. John's legacy is that he has inspired so many disciples that his work of discovery won't be complete any time soon. Certainly the field of nutrition science has advanced with the life of Dr. John Milner, and I believe the health of all consumers around the world will benefit as well.

Thanks to our colleagues at USDA for sharing the following career capsule:

*John A. Milner, Director of the Beltsville Human Nutrition Research Center, Beltsville, Maryland was an internationally respected scientist in the nutrition and health community, known for his broad understanding and championing of the role of nutrition and diet from the molecular level to its use in nutrition policy development and implementation. Dr. Milner joined ARS as director in July 2012. Prior to joining USDA, he was at the National Institutes of Health as the Chief of the Nutritional Science Research Group, Division of Cancer Prevention of the National Cancer Institute. He joined the federal government in 2000, after serving as head of the Department of Nutrition at Pennsylvania State University where he was*

*Professor of Nutrition, a title he also held previously at the University of Illinois Champaign-Urbana, where he had served as Director of the Division of Nutritional Sciences and as an Assistant Director of the Agricultural Experiment Station.*

*Dr. Milner earned a Ph.D. from Cornell University in nutrition, with minors in biochemistry and physiology and a B.S. in Animal Sciences from Oklahoma State University. Dr. Milner was a member of several professional organizations, including the American Society for Nutrition (having served as President of the Society in 1995), American Chemical Society's Food and Chemistry Division, the Institute of Food Technologists (named a fellow of IFT in 2009), and the International Society of Nutrigenetics/Nutrigenomics, where he was a member of the Board. He was a fellow in the American Association for the Advancement of Science and an Honorary Member of the Academy of Nutrition and Dietetics (formerly, the American Dietetic Association).*

*Dr. Milner published more than 250 book chapters, monographs, and journal articles, and served on the editorial boards for a number of journals, and was currently serving as a senior editor for the Journal of Cancer Prevention Research. Over the years, Dr. Milner served in a number of roles, including as a member of USDA's Human Nutrition Board of Scientific Counselors, the Joint USDA/HHS Dietary Guidelines Committee, and most recently as incoming Chair of the International Life Sciences Institute (ILSI) Global Board of Trustees, where he had been serving as a Trustee. He served as a member of committees of the Institute of Medicine, the U.S. Olympic Committee Dietary Guidelines Task Force, and as chair of the World Cancer Research Fund/American Institute for Cancer Research Working Group on Cancer Research Mechanisms. In 2008, he received the David A. Kritchevsky Career Achievement Award in Nutrition from the American Society for Nutrition (ASN), and was recently named the recipient of the Conrad Elvehjem Award for Public Service in Nutrition from ASN for 2013.*

We also extend our sympathy to John's daughter, Kristina and his son, Matt.